

THE FEDERAL DEBT

By

David W. McFarland

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Dr. A. Rex Johnson

PREFACE

The federal debt is a subject which has received a great deal of attention by writers past and present in this country and abroad. Nevertheless, it is a subject which causes much confusion in the minds of the public, to whom it is very important. Many current events are directly related to the federal debt. Examples are inflation, business conditions, the budget, growth of the economy, and the cold war.

This paper was undertaken for two reasons: First, the federal debt always has appeared to be a complicated and very technical matter usually set forth in obscure terms. That it is complicated and technical is not denied, but an effort has been made herein to make it less obscure. Second, throughout the development of this country there has been general concern about the size of the debt. Looking back at some of the earlier causes of concern (viewed by hindsight, that is) there was little reason for alarm. The present size of the federal debt, however, is such that we cannot become complacent. The debt must be considered in its present context.

The debt has been recently in the headlines because of the law restricting bond interest rates to 4-1/4 percent. Congress has taken testimony from many leaders in government and business in connection with this subject and concerning raising the debt ceiling. The subject is a dynamic one--always changing.

As the Soviet Union increases its industrial capacity and begins to approach a parity with our own production, increased economic warfare is expected. The United States, to win this race, must remain in excellent financial health. Proper management of the debt is necessary.

D.W.M.

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CHAPTER I

HISTORICAL BACKGROUND OF THE FEDERAL DEBT AN INTRODUCTION

The Beginnings of Public Debt

Nations began to contract public debts over 250 years ago. Before 1688 in Great Britain, when the government needed money, the King would give his personal pledge, backed by his jewels, for repayment. The revolution of 1688 made this course impractical after that date, and the credit of the entire nation was substituted.¹ Other nations began to use the same means to meet emergencies. Today practically every civilized country has a standing debt.

Misgivings Caused by Public Debt

Over the years many people have resisted going too heavily in debt. Adam Smith prophesied before 1790 that the European countries would eventually be ruined by their enormous obligations. Today, of course, the debts of European countries are much greater than they were then. There is slight indication that his fears were justified, even though many countries are loaded heavily with debt. Alexander Hamilton felt that rightly managed and in the right amounts, a public debt would be a "national blessing" because it would provide a gilt-edge asset that would give businessmen an income and enable them to trade for smaller profits.²

¹"National Debt," World Book Encyclopedia, Vol. VIII.

²Paul A. Samuelson, Economics, An Introductory Analysis (New York: Mc-Graw-Hill Book Co., Inc., 1958), p. 352.

Public Debt in the United States

Paying for the Revolutionary War.--The Revolutionary War was a great strain on the financial resources of the 13 original states. The United States Government assumed the debts of the 13 States in addition to the debt incurred by the Continental Congress. Article 6 of the Constitution states:

All debts contracted and engagements entered into, before adoption of this Constitution, shall be as valid against the United States under this Constitution, as under the Confederation

The increase in debt during wars.--The federal debt began during the Revolutionary War. The pattern since that time has been for the debt generally to decrease between wars and to increase during wars. In 1791 the debt was about \$75.5 million. It rose to a height of about \$87 million in 1804, and then declined until the War of 1812. After this war, in 1816, the debt was \$127 million. It then declined until 1835 to about \$33.5 million. During the Mexican War it again increased, and the Civil War raised it to \$2.75 billion in 1866. Although the Spanish-American War caused an increase at the turn of the century, the increase during World War I was much greater. In 1919 the debt stood at \$26 billion. Table 1 shows the growth of the debt from the Civil War to 1956. World War II caused the greatest increase, with a peak of \$280 billion.

Before World War I special act required.--Until World War I, before money could be borrowed, a special act of Congress had to be passed.³ The first statutory debt limit was passed in 1917. Congress has either directly authorized the debts or it has placed a ceiling on debts that could be made. Section 8, Article 1 to the Constitution states:

³U. S. Congress, Senate, Committee on Finance, Hearings, Debt Increase, 86th Cong., 1st Sess., 1959, p. 39.

TABLE 1

THE FEDERAL DEBT
(Billions of Dollars)

Year	Amount ^a	Year	Amount ^b
1860	\$65 million	1916	\$ 1
1866	2.75	1919	26
1870	2.4	1930	16
1880	2.0	1939	47.5
1890	1.1	1946	259.5*
1900	1.3	1952	267.5
1910	1.1	1956	277

*World War II Peak \$280 Billion

Source: ^a"National Debt," World Book Encyclopedia, Vol. VIII.

^bU. S. Congress, Senate, Committee on Finance, Investigation of the Financial Condition of the United States, 85th Cong., 1st Sess., 1957, p. 661.

"The Congress shall have power . . . to borrow money on the credit of the United States" The special act of Congress authorizing a statutory debt limit was called the Second Liberty Bond Act. Table 2 is a partial listing of the amendments to the act, showing the increases in the statutory limit to the present time. The present permanent ceiling is \$285 billion with an additional \$10 billion through June 30, 1960.

Summary.--The federal debt began with the beginnings of the Republic. The Constitution gives Congress power to borrow money on credit. Statutory debt was used first in 1917 with the authorization of \$11.5 billion worth of bonds and certificates. The present permanent ceiling is \$285 billion and the temporary ceiling through June 30, 1960 is \$10 billion more for a total of \$295 billion.

TABLE 2

DEBT LIMITATION UNDER SEC. 21 OF THE 2d LIBERTY BOND ACT,
AS AMENDED (EXTRACTS)^a

Date of Act	Remarks	Debt Limit ^b
Sept. 24, 1917	Bonds Authorized	7.5
	Certificates Authorized (with revolving authority)	4.0
Mar. 3, 1919	Notes Authorized	
Nov. 24, 1921	Revolving authority for notes	
June 17, 1929	Treasury bills authorized in lieu of certificates	
Feb. 4, 1935	Established revolving authority for bonds Authorized U.S. Savings Bonds	45.0
Feb. 19, 1941	Increased debt limit	65.0
Mar. 28, 1942	Increased debt limit	125.0
April 10, 1943	Increased debt limit	210.0
June 9, 1944	Increased debt limit	260.0
Apr. 3, 1945	Increased debt limit	300.0
June 26, 1946	Decreased debt limit	275.0
Aug. 28, 1954	Temporary increase until June 30, 1955	281.0
June 30, 1955	Extended temporary increase for one year	281.0
July 9, 1956	Temporary increase over permanent limit of 275 until June 30, 1957	278.0
Feb. 26, 1958	Temporary increase terminated as of July 1, 1957. Debt reverts to \$275 billion. January 1958 until June 30, 1959, temporary increase	275.0 280.0
Sept. 2, 1958	Permanent ceiling	283.0
	Temporary addition through June 30, 1959	288.0
June 30, 1959	Permanent ceiling	285.0
	Temporary addition through June 30, 1960	295.0

Source: ^aU. S. Congress, House, Public Debt Act of 1959, 86th Cong., 1st Sess., 1959, Rept. No. 556, p. 4.

^bDebt limit is not shown between 1917 and 1935 because of numerous changes.

CHAPTER II

WHAT IS THE FEDERAL DEBT?

General

There are many ways in which the debt can be considered. Table 2 shows the history of changes to debt limitation under section 21 of the Second Liberty Bond Act. Included in the amounts in both Tables 1 and 2 are some debt that the Federal Government owes to itself and debt owed to the Federal Reserve System which might be considered to be owed to the Federal Government. For purposes of this paper the federal debt is considered to be the gross amount as shown in Table 1. It is realized that in more technical terms the debt might be defined as the public issues of marketable and non-marketable securities as shown in Table 3. Tables 2 and 3 refer to "bills," "certificates," "notes," and "bonds." Bills are of shortest duration, being followed in that regard by certificates and notes. Bills are usually short-term instruments of 90-day duration. Certificates are sometimes related to the payment of taxes, and they may be up to a year in duration. Notes can be issued for periods of from 1 to 5 years. Bonds are longer term securities and have a duration of over five years.⁴

Federal Ownership of Part of the Debt

The gross public debt does not give a complete picture of the true debt of the Federal Government. From this must be subtracted the amounts held

⁴Senate Committee on Finance, Financial Condition of the U. S. Hearings, 1957, p. 413.

TABLE 3

U.S. GOVERNMENT DEBT BY TYPE OF SECURITY
December 31, 1959^a
(Billions of Dollars)

Total Gross Debt* 290.9						
Public Issues**						
Total***	Marketable					Non-Marketable
	Total***	Bills	Certificates	Notes	Bonds, Bank Eligible	Savings Bonds
244.2	188.3	39.6	19.7	44.2	84.8	48.2

*Includes some debt not subject to statutory limit (\$411 million on Dec. 31, 1959, and fully guaranteed securities.

**Includes amounts held by government agencies and trust funds, \$10.2 billion Nov. 30, 1959.

***Included in public issues are \$7 billion convertible bonds and non-public special issues of \$43.5 billion.

Source: ^a Federal Reserve Bulletin, January 1960 (Washington: Federal Reserve System, 1960), p. 58

by the Government.⁵ Table 4 shows the ownership of United States Government securities, direct and fully guaranteed as of October 31, 1959. At that time the total gross debt was \$291.4 billion. Of this amount almost \$54 billion was held by government agencies and trust funds, including the Postal Savings System. Of the remaining \$237.8 billion of the debt held by the public, almost \$27 billion is owned by the Federal Reserve banks. The true debt then is a little over \$210 billion. Banks other than Federal Reserve banks hold \$67 billion of this amount. Individuals hold \$69 billion of which \$46 billion represents savings bonds. Insurance companies and corporations hold \$35.5 billion, and miscellaneous investors hold \$21.7 billion. State and local governments hold \$17.4 billion. This portion of the debt,

⁵ U. S., Congress, Joint Economic Committee, Study of Employment, Growth, and Price Levels, 86th Cong., 2d Sess., 1959, Study Paper No. 19, p. 1.

OWNERSHIP OF U.S. GOVERNMENT SECURITIES, DIRECT AND FULLY GUARANTEED
AS OF OCTOBER 31, 1959^a
(Billions of Dollars)

Total Gross Debt \$291.4 Billion								
Held by U.S. Gov't Agencies & Trust Funds*	Held by Public							
	Total	Fed. Res. Banks	Other Banks	Ins. Cos. & Corps.	State & Local Gov'ts	Individuals		Misc. Inves- tors**
						Sav. Bonds	Other Secur.	
53.6	237.8	26.6	67.4	35.5	17.4	46.3	22.8	21.7

*Includes Postal Savings System.

**Includes savings and loan associations, dealers and brokers, foreign accounts, corporate pension funds, and non-profit institutions.

Source: ^a Federal Reserve Bulletin, January 1960, p. 58.

while truly a part of net federal debt, might be considered as an offset to other debt, that of the state and local governments.

Total Liabilities of the Government

A digression.--The federal debt is only a part of the total liabilities of the Federal Government. Except for the public debt outstanding and financial commitments of the Government involving recurring costs for which funds are regularly appropriated by the Congress and are not obligated [aid to States for welfare programs and participation in employee-retirement systems], the major financial commitments of the U. S. Government are segregated into four categories: (a) loans guaranteed and insured by government agencies, (b) insurance in force, (c) obligations issued on credit of the United States, and (d) undisbursed commitments. The commitments or contingencies are as follows:

Commitment or Contingency	(Billions of \$)	
	Gross Amount	Public Debt Securities held
Loans guaranteed, or insured by government agencies	\$ 47.2	\$.5
Insurance in force	226.	83.7
Obligations issued on credit of the U.S.	27.	26.3
Undisbursed commitments -		
To make future loans	4.8	
To purchase mortgages	1.6	
To guarantee and insure loans	5.5	
Unpaid subscriptions		
International Bank	2.5	
Totals	\$314.6	\$110.5 ⁶

Guaranteed loans.---Guaranteed loans include loans insured by the following government agencies, or for the purposes indicated:

Commodity Credit Corporation

Farmers Home Administration

Civil Aeronautics Board

Federal Maritime Board and Maritime Administration

Development Loan Fund

Export-Import Bank of Washington

Housing and Home Finance Agency (FHA, etc.)

International Cooperation Administration

Small Business Administration

Reconstruction Finance Corporation

Defense Production Act of 1950

Federal Civil Defense Act

⁶ Senate Committee on Finance, Debt Ceiling Hearings, 1959, p. 15.

U. S. Information Agency
Veterans' Administration.

Insurance in force.--Insurance in force consists of insurance of the following agencies:

Federal Crop Insurance Corporation
Federal Maritime Board and Maritime Administration
(War risk insurance)
Export-Import Bank of Washington
Federal Deposit Insurance Corporation
Federal Home Loan Bank Board (Savings and Loan Insurance)
Veterans' Administration (Veterans' life insurance)

Obligations of the U. S.--Obligations issued on credit of the United States consist of postal savings certificates of the U. S. Postal Savings System and the Canal Zone Postal Savings System, and of the face value of Federal Reserve notes (\$27 billion).

Undisbursed commitments.--Undisbursed commitments of the Federal Government consist of:

Commitments to make future loans to the following agencies:

Commodity Credit Corporation
Farmers Home Administration
Rural Electrification Administration
Development Loan Fund
Export-Import Bank of Washington
Housing and Home Finance Agency (College housing loans,
Public facility loans, Urban renewal fund)
Public Housing Administration
Bureau of Commercial Fisheries

Defense Minerals Exploration Administration

International Cooperation Administration

Small Business Administration

Reconstruction Finance Corporation

Defense Production Act of 1950

Veterans' Administration

Commitments to purchase mortgages:

Farmers Home Administration

Housing and Home Finance Agency,

Federal National Mortgage Association

Commitments to guarantee and insure loans:

Farmers Home Administration

Federal Maritime Board and Maritime Administration

Housing and Home Finance Agency,

Federal Housing Administration

U. S. Information Agency

Defense Production Act of 1950.

Long-range programs.--The programs listed above are of a long-range nature. They are different from the direct debt of the United States although, as has been noted, some of them are offset by public debt securities. As an example, the commitment or contingency of the Federal Deposit Insurance Corporation [FDIC] is estimated⁷ to be \$137 billion; however, insured commercial and mutual savings banks hold \$71 billion in public debt securities which offset a portion of this commitment. The long-range programs may or may not commit the Government to expend funds at a future time. The liability of the Government depends upon a variety of factors, such as the trend of prices and employment and other economic factors.

⁷Ibid., p. 16.

Combining commitments and federal debt.--It would be difficult to combine the amounts listed as future commitments with the public debt outstanding because duplication would occur. The offset to the commitment of the Federal Deposit Insurance Corporation shown above is an example. The banks insured by the FDIC have assets of \$267.7 billion. Of this \$71 billion are in public debt securities which are reflected in the public debt. The assets of the insured banks and the FDIC stand between the insured deposits and the Government's obligations to redeem them.

Life insurance liability.--Veterans' life insurance policies have a face value of about \$43 billion. The actual liability of the Government is probably less than this because some of these policies will be permitted to lapse and future premiums, interest, and the invested reserves of about \$7 billion of public debt securities should cover the normal mortality risk.

Federal Reserve notes.--Federal Reserve notes are obligations of the United States which, at the end of 1958, amounted to \$27 billion. These notes are backed by \$53.1 billion of assets of the issuing Federal Reserve banks. These assets include \$26.3 billion of Government securities already included in the public debt. The Federal Reserve notes are secured by collateral amounting [at the end of 1958] to \$18.6 billion in Government securities and \$11.1 billion in gold certificates.

Senator Byrd during hearings on the debt ceiling increase on June 25, 1959 asked a number of questions of Secretary of the Treasury Anderson concerning the contingent liabilities of the Government:

Senator Byrd. What is the total?

Secretary Anderson. I will have to add them up for you in just a minute. We have got them in categories. Senator Byrd, lumping together all classes of obligations, regardless of the contingencies that may attend them, the December 31 figures would show roughly \$310 billion. I should say that this does not

include the recent commitment of obligations to the World Bank, which would have to be added to it and to the noninterest-bearing notes of the Monetary Fund.

Senator Byrd. Would it include any contingent liability in social security?

Secretary Anderson. No, it does not.

and,

Senator Byrd. Do you think there is any contingent liability in social security? We have passed a law whereby the Government is obligated to make these payments, whether money is in the trust fund or not.

Secretary Anderson. Well, we would hope that the taxes collected under the social security laws would be such as to pay off the liabilities, and I think it is quite --

Senator Byrd. It is a contingent liability, then, is it not?

Secretary Anderson. It may be a contingent liability, but not like the others.

Senator Byrd. We are obligated to pay that whether or not there is money in the trust fund?

Secretary Anderson. I think it is only fair to say that included in this list are some rather remote contingencies.⁸

Relationship of Federal Debt to Total Liabilities

Much concern has been shown in the past by the public for the enormous size of the debt. The information in the paragraphs immediately preceding has been included to indicate that there are other commitments of the Government which are just as important, if not more so, as the debt.

Summary.--The debt can be thought of in terms of the gross amount as shown in Table 1. As such the debt cannot, by law, exceed the amount shown in Table 2. Public issues of the debt are indicated in Table 3, which lists the amounts of bills, certificates, notes, bank eligible bonds, and non-marketable savings bonds. The gross debt is in part owned by the Federal Government itself, as shown in Table 4. The Federal Government has other obligations which probably exceed the debt in size.

⁸Ibid., p. 18.

CHAPTER III

HOW IS THE DEBT MANAGED?

General.

Management of the debt means, for our purposes, the choice of type or form of debt and the proportionate amounts of the different types used; the pattern selected for debt maturities; the amount of debt placed with different holders; the decisions whether to repay or refund obligations which mature; the interest rates to be offered on refunding; and the treatment given different classes of debt and the different types of bond holders. It also means the provisions to be attached to new bond issues, consideration of the needs of prospective holders, and policies to be adopted in retiring debt or creating new debt.⁹ Inherent in the above is the problem of the relative weights to be given the various factors. Responsibility for the various segments of fiscal and monetary policy is not vested in a single agency but is split. The federal agencies which have an effect on fiscal and monetary policy include:

Bureau of the Budget
Department of the Treasury
Department of Agriculture
National Housing Agency
Federal Reserve System
Federal Deposit Insurance Corporation
General Accounting Office
Securities and Exchange Commission.¹⁰

⁹Charles C. Abbott, Management of the Federal Debt (New York: McGraw-Hill Book Co., 1946), p. 1.

¹⁰"Our Form of Government," Fortune (Supplement), Nov. 1943, p. 4.

The main interest in this paper is in the responsibilities and functions of the Treasury and the Federal Reserve. Naturally, with so many agencies involved, coordination is at times difficult. Conflicts may exist which are not compatible.

Congress and the Debt

Congress, by virtue of the authority given it by the Constitution, has the power to borrow money on the credit of the United States. Congress has passed laws which have given certain authority and responsibility to the Secretary of the Treasury and to the Federal Reserve Board for aspects of management of the debt. Congress has been quite jealous of its responsibility concerning federal debt. As has been noted in Chapter I¹¹ until 1917 a special act had to be passed upon each occasion when money was borrowed. Since that time a tether has been kept on the executive branch of government in the form of ceilings of various kinds, as noted in Table 2. Congress long ago recognized the debt issue as a political one which could be resurrected from time to time for getting votes.

Responsibility for Debt Management

Debt management is the responsibility of the Treasury, but has an important effect on credit regulation and control, which is the responsibility of the Federal Reserve System. The Treasury primarily is responsible for fiscal policy and the Federal Reserve is responsible for monetary policy.

Fiscal policy.--Fiscal policy consists of the revenue measures, expenditures, borrowing, and debt management. The primary goal is economic stability. The objectives of fiscal policy can be political as well as economic as is shown by the responsibility of the Government to provide full

¹¹Supra, p. 2

employment for its citizens.¹² Fiscal measures work mainly through the money-collecting and money-spending activities of the Federal Government.

Monetary policy.--Monetary policy concerns the availability and amount of credit, the cost of lending and borrowing [public and private], the volume of saving, and the value of the dollar.¹³

The Treasury Department and Fiscal Policy

Creation and organization.--The Treasury Department was created by act of Congress approved September 2, 1789. The original act established the Treasury to superintend and manage the national finances. The Secretary of the Treasury was charged with the preparation of plans for the improvement and management of revenue and the support of public credit.¹⁴ To administer the public debt of the United States, Congress, in the act of August 4, 1790, provided a Loan Commissioner in each of the States. In 1817 these duties were transferred to the Bank of the United States and in 1836 were transferred to the Secretary of the Treasury. The interest bearing debt had been repaid by 1836. By the act of July 17, 1861, Congress for the first time gave the Secretary of the Treasury authority to issue United States securities.¹⁵ The Division of Loans was established in the Secretary's Office and was later consolidated with the Division of Currency. Public debt activities were carried on by the Division of Loans and Currency and by the Office of the Register of the Treasury. A Commissioner of the Public Debt was appointed by

¹²Harold D. Smith, The Management of Your Government (New York: McGraw-Hill Book Co., Inc., 1945), p. 172.

¹³Senate Committee on Finance, Financial Condition of the U. S. Hearings, 1957, p. 1229.

¹⁴U. S. Government Organization Manual, 1959-60 (Washington: U. S. Government Printing Office, 1959), p. 599.

¹⁵The United States Treasury (Washington: U. S. Government Printing Office, 1959), p. 17.

the Secretary of the Treasury in 1919 under the general direction of the Fiscal Assistant Secretary. The Commissioner of the Public Debt was to supervise the Division of Loans and Currency. A Division of Public Debt Accounts and Audit was established in 1920 and also was placed under the Commissioner of the Public Debt. Congress formally recognized the Public Debt Service in 1921. It was re-designated the Bureau of the Public Debt by Reorganization Plan III. The Division of Savings Bonds was added, and the Bureau was made part of the Fiscal Service of the Treasury Department in 1940. The present organization of the Treasury Department for managing the debt is as follows:

Secretary of the Treasury

Undersecretary for Monetary Affairs

U. S. Savings Bonds Division

Fiscal Assistant Secretary

Bureau of the Public Debt

Office of the Treasurer

Securities Division.¹⁶

Administration of the Public Debt

Bureau of the Public Debt.--The Bureau of the Public Debt administers the debt.¹⁷ It conducts and directs the transactions in the security issues of the United States. It prepares the offering circulars and instructions relating to each offering of public debt securities. It directs the handling of subscriptions for the purchase of these securities, determining allotments where necessary. It prepares regulations governing public debt securities and supervises purchases and sales. It keeps numerous records of ownership of securities, pays debt interest, and handles claims resulting from lost, stolen, or destroyed securities. The Bureau of the Public Debt accounts for all public debt securities including the over-all public debt security

¹⁶Government Organization Manual, 1959, op.cit., p. 600.

¹⁷The United States Treasury, op. cit., p. 19.

The following is a list of the names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1911. The names are given in alphabetical order of the surnames. The names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1911, are given in alphabetical order of the surnames. The names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1911, are given in alphabetical order of the surnames.

ALFRED C. BROWN
JOHN D. CROCKER
JAMES H. HARRIS
WILLIAM L. HARRIS
JOHN L. HARRIS
JOHN L. HARRIS
JOHN L. HARRIS
JOHN L. HARRIS
JOHN L. HARRIS
JOHN L. HARRIS

The following is a list of the names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1911. The names are given in alphabetical order of the surnames. The names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1911, are given in alphabetical order of the surnames. The names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1911, are given in alphabetical order of the surnames.

transactions conducted by various Government offices and by the Federal Reserve Banks acting in their capacities as fiscal agents of the United States.

Securities Division of Office of Treasurer.--The Securities Division of the Office of the Treasurer of the United States conducts over-the-counter transactions in public debt obligations including issues, exchanges, re-issues, and the payment of principal and interest. It holds in custody miscellaneous securities and trust funds.

U. S. Savings Bonds Division.--The U. S. Savings Bonds Division of the Office of the Secretary (Undersecretary for Monetary Affairs) promotes the sale and holding of savings bonds. After savings bonds are issued to the public they become the responsibility of the Bureau of the Public Debt.

The Treasury and debt policy.--The Treasury Department is involved in debt policy as concerns debt retirement, interest policy, offering policies, and debt management. The rate of debt retirement is the central issue in debt management.¹⁸ There are two ways that retirement can be financed--taxation and money creation. In money creation, debt instruments are replaced by money, liquidity is increased and spending is encouraged. In this way the interest cost is reduced to zero. Obviously, this course would be desirable only in a recession or depression. Offering policy concerns the types of securities (bills, certificates, notes, or bonds) to be offered to the public for refunding or new money. Interest policy is discussed below under debt management and the section on monetary policy which follows.

Debt management.--There are three major facets of the Treasury's debt management problem. They are the rising cost of borrowing money, the shortening of debt maturities, and the inflationary impact.¹⁹

¹⁸James M. Buchanan, Public Principles of Public Debt (Homewood, Ill.: Richard D. Irwin, Inc., 1958), p. 177.

¹⁹Congressional Quarterly Almanac, 86th Cong., 1st Sess., 1959, Vol. XV (Congressional Quarterly, Inc., Washington, D. C., 1959), p. 273.

Rising cost of borrowing money.--Public Law 86-346 of 22 September 1959, authorized the President to raise interest rates on Series E and H Savings Bonds, but the Congress has refused to raise the $4\frac{1}{4}\%$ ceiling on Government bonds [having maturity dates longer than 5 years]. The problem is two-fold. Higher interest rates will result in higher interest costs. The burden of the interest itself has become a big problem. The second aspect is that the Treasury has been unable to sell bonds in the quantities desired because of the inadequate interest rate.

Shortening maturity.--By mid-1959 about \$182 billion of the total national debt was in marketable public issues. Of this amount, 75% was scheduled to mature in 5 years. The average maturity had shortened from 64 months in mid-1953 to 55 months in mid-1959. Seventy-three billion dollars or 40% of the marketable debt needed to be refinanced in one year, including the "floating debt" (publicly held marketable securities maturing within one year and non-marketable demand debt in the hands of large investors and payable on demand).²⁰ Table 5 shows a comparison with other recent periods, and Table 6 shows maturity classes as of October 31, 1959. Other things being equal, maturity dates shorten if only by reason of passage of time. At the present time maturity dates have further shortened to the point where 79% are scheduled to mature in 5 years.²¹

Inflationary impact.--Short term securities are not particularly attractive to individual investors or institutions which have to preserve funds for the more distant future. For the most part, short term issues are bought by commercial banks.²² Banks pay for these government securities by

²⁰ Buchanan, op. cit., p. 180.

²¹ Washington Post and Times-Herald, February 10, 1960, p. B8.

²² "Why Treasury is Hamstrung," Business Week, Feb. 23, 1957, p. 85.

TABLE 5

THE FLOATING DEBT^a(HELD OUTSIDE OF FEDERAL RESERVE BANKS AND GOVERNMENT INVESTMENT ACCOUNTS)
(Billions of Dollars)

Year (December)	Total	Nonmarketable Demand Debt*	Marketable Maturing Within 1 Year
1946	\$57.5	\$25.	\$32.5
1952	74.5	31.5	43.
1956	64.	18.5	45.5

*Excluding A to E and H Savings Bonds

Source: ^aSenate Committee on Finance, Financial Condition of the U. S. Hearings, 1957, p. 676.

TABLE 6

MARKETABLE SECURITIES, BY MATURITY CLASS^a
(Billions of Dollars)

Date	Total	Within 1 year	1 - 5 years	5 - 10 years	Over 10 years
Oct. 31, 1959	\$187.5	\$75.8	\$63.4	\$19.8	\$28.4

Source: ^aFederal Reserve Bulletin, January 1960, p. 59.

increasing their deposit liabilities and that adds to the money supply, with the consequent inflationary result. It is standard practice for the Treasury to try to insulate the debt by shifting its ownership from banks to non-bank investors. Table 7 shows that, until 1956 at least, the Treasury was having success in this effort, although not to any great extent.

As a general rule, then, longer term securities are held by insurance companies whereas commercial banks, because of the nature of their business, hold intermediate and shorter term securities. Redemption of long term debt with short term debt, as has been necessary during the period when the

THE UNITED STATES

(UNITED STATES OF AMERICA, 1900-1909, 1910-1919, 1920-1929, 1930-1939, 1940-1949, 1950-1959, 1960-1969, 1970-1979, 1980-1989, 1990-1999, 2000-2009, 2010-2019, 2020-2029, 2030-2039, 2040-2049, 2050-2059, 2060-2069, 2070-2079, 2080-2089, 2090-2099, 2100-2109, 2110-2119, 2120-2129, 2130-2139, 2140-2149, 2150-2159, 2160-2169, 2170-2179, 2180-2189, 2190-2199, 2200-2209, 2210-2219, 2220-2229, 2230-2239, 2240-2249, 2250-2259, 2260-2269, 2270-2279, 2280-2289, 2290-2299, 2300-2309, 2310-2319, 2320-2329, 2330-2339, 2340-2349, 2350-2359, 2360-2369, 2370-2379, 2380-2389, 2390-2399, 2400-2409, 2410-2419, 2420-2429, 2430-2439, 2440-2449, 2450-2459, 2460-2469, 2470-2479, 2480-2489, 2490-2499, 2500-2509, 2510-2519, 2520-2529, 2530-2539, 2540-2549, 2550-2559, 2560-2569, 2570-2579, 2580-2589, 2590-2599, 2600-2609, 2610-2619, 2620-2629, 2630-2639, 2640-2649, 2650-2659, 2660-2669, 2670-2679, 2680-2689, 2690-2699, 2700-2709, 2710-2719, 2720-2729, 2730-2739, 2740-2749, 2750-2759, 2760-2769, 2770-2779, 2780-2789, 2790-2799, 2800-2809, 2810-2819, 2820-2829, 2830-2839, 2840-2849, 2850-2859, 2860-2869, 2870-2879, 2880-2889, 2890-2899, 2900-2909, 2910-2919, 2920-2929, 2930-2939, 2940-2949, 2950-2959, 2960-2969, 2970-2979, 2980-2989, 2990-2999, 3000-3009, 3010-3019, 3020-3029, 3030-3039, 3040-3049, 3050-3059, 3060-3069, 3070-3079, 3080-3089, 3090-3099, 3100-3109, 3110-3119, 3120-3129, 3130-3139, 3140-3149, 3150-3159, 3160-3169, 3170-3179, 3180-3189, 3190-3199, 3200-3209, 3210-3219, 3220-3229, 3230-3239, 3240-3249, 3250-3259, 3260-3269, 3270-3279, 3280-3289, 3290-3299, 3300-3309, 3310-3319, 3320-3329, 3330-3339, 3340-3349, 3350-3359, 3360-3369, 3370-3379, 3380-3389, 3390-3399, 3400-3409, 3410-3419, 3420-3429, 3430-3439, 3440-3449, 3450-3459, 3460-3469, 3470-3479, 3480-3489, 3490-3499, 3500-3509, 3510-3519, 3520-3529, 3530-3539, 3540-3549, 3550-3559, 3560-3569, 3570-3579, 3580-3589, 3590-3599, 3600-3609, 3610-3619, 3620-3629, 3630-3639, 3640-3649, 3650-3659, 3660-3669, 3670-3679, 3680-3689, 3690-3699, 3700-3709, 3710-3719, 3720-3729, 3730-3739, 3740-3749, 3750-3759, 3760-3769, 3770-3779, 3780-3789, 3790-3799, 3800-3809, 3810-3819, 3820-3829, 3830-3839, 3840-3849, 3850-3859, 3860-3869, 3870-3879, 3880-3889, 3890-3899, 3900-3909, 3910-3919, 3920-3929, 3930-3939, 3940-3949, 3950-3959, 3960-3969, 3970-3979, 3980-3989, 3990-3999, 4000-4009, 4010-4019, 4020-4029, 4030-4039, 4040-4049, 4050-4059, 4060-4069, 4070-4079, 4080-4089, 4090-4099, 4100-4109, 4110-4119, 4120-4129, 4130-4139, 4140-4149, 4150-4159, 4160-4169, 4170-4179, 4180-4189, 4190-4199, 4200-4209, 4210-4219, 4220-4229, 4230-4239, 4240-4249, 4250-4259, 4260-4269, 4270-4279, 4280-4289, 4290-4299, 4300-4309, 4310-4319, 4320-4329, 4330-4339, 4340-4349, 4350-4359, 4360-4369, 4370-4379, 4380-4389, 4390-4399, 4400-4409, 4410-4419, 4420-4429, 4430-4439, 4440-4449, 4450-4459, 4460-4469, 4470-4479, 4480-4489, 4490-4499, 4500-4509, 4510-4519, 4520-4529, 4530-4539, 4540-4549, 4550-4559, 4560-4569, 4570-4579, 4580-4589, 4590-4599, 4600-4609, 4610-4619, 4620-4629, 4630-4639, 4640-4649, 4650-4659, 4660-4669, 4670-4679, 4680-4689, 4690-4699, 4700-4709, 4710-4719, 4720-4729, 4730-4739, 4740-4749, 4750-4759, 4760-4769, 4770-4779, 4780-4789, 4790-4799, 4800-4809, 4810-4819, 4820-4829, 4830-4839, 4840-4849, 4850-4859, 4860-4869, 4870-4879, 4880-4889, 4890-4899, 4900-4909, 4910-4919, 4920-4929, 4930-4939, 4940-4949, 4950-4959, 4960-4969, 4970-4979, 4980-4989, 4990-4999, 5000-5009, 5010-5019, 5020-5029, 5030-5039, 5040-5049, 5050-5059, 5060-5069, 5070-5079, 5080-5089, 5090-5099, 5100-5109, 5110-5119, 5120-5129, 5130-5139, 5140-5149, 5150-5159, 5160-5169, 5170-5179, 5180-5189, 5190-5199, 5200-5209, 5210-5219, 5220-5229, 5230-5239, 5240-5249, 5250-5259, 5260-5269, 5270-5279, 5280-5289, 5290-5299, 5300-5309, 5310-5319, 5320-5329, 5330-5339, 5340-5349, 5350-5359, 5360-5369, 5370-5379, 5380-5389, 5390-5399, 5400-5409, 5410-5419, 5420-5429, 5430-5439, 5440-5449, 5450-5459, 5460-5469, 5470-5479, 5480-5489, 5490-5499, 5500-5509, 5510-5519, 5520-5529, 5530-5539, 5540-5549, 5550-5559, 5560-5569, 5570-5579, 5580-5589, 5590-5599, 5600-5609, 5610-5619, 5620-5629, 5630-5639, 5640-5649, 5650-5659, 5660-5669, 5670-5679, 5680-5689, 5690-5699, 5700-5709, 5710-5719, 5720-5729, 5730-5739, 5740-5749, 5750-5759, 5760-5769, 5770-5779, 5780-5789, 5790-5799, 5800-5809, 5810-5819, 5820-5829, 5830-5839, 5840-5849, 5850-5859, 5860-5869, 5870-5879, 5880-5889, 5890-5899, 5900-5909, 5910-5919, 5920-5929, 5930-5939, 5940-5949, 5950-5959, 5960-5969, 5970-5979, 5980-5989, 5990-5999, 6000-6009, 6010-6019, 6020-6029, 6030-6039, 6040-6049, 6050-6059, 6060-6069, 6070-6079, 6080-6089, 6090-6099, 6100-6109, 6110-6119, 6120-6129, 6130-6139, 6140-6149, 6150-6159, 6160-6169, 6170-6179, 6180-6189, 6190-6199, 6200-6209, 6210-6219, 6220-6229, 6230-6239, 6240-6249, 6250-6259, 6260-6269, 6270-6279, 6280-6289, 6290-6299, 6300-6309, 6310-6319, 6320-6329, 6330-6339, 6340-6349, 6350-6359, 6360-6369, 6370-6379, 6380-6389, 6390-6399, 6400-6409, 6410-6419, 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11590-11599, 11600-11609, 11610-11619, 11620-11629, 11630-11639, 11640-11649, 11650-11659, 11660-11669, 11670-11679, 11680-11689, 11690-11699, 11700-11709, 11710-11719, 11720-11729, 11730-11739, 11740-11749, 11750-11759, 11760-11769, 11770-11779, 11780-11789, 11790-11799, 11800-11809, 11810-11819, 11820-11829, 11830-11839, 11840-11849, 11850-11859, 11860-11869, 11870-11879, 11880-11889, 11890-11899, 11900-11909, 11910-11919, 11920-11929, 11930-11939, 11940-11949, 11950-11959, 11960-11969, 11970-11979, 11980-11989, 11990-11999, 12000-12009, 12010-12019, 12020-12029, 12030-12039, 12040-12049, 12050-12059, 12060-12069, 12070-12079, 12080-12089, 12090-12099, 12100-12109, 12110-12119, 12120-12129, 12130-12139, 12140-12149, 12150-12159, 12160-12169, 12170-12179, 12180-12189, 12190-12199, 12200-12209, 12210-12219, 12220-12229, 12230-12239, 12240-12249, 12250-12259, 12260-12269, 12270-12279, 12280-12289, 12290-12299, 12300-12309, 12310-12319, 12320-12329, 12330-12339, 12340-12349, 12350-12359, 12360-12369, 12370-12379, 12380-12389, 12390-12399, 12400-12409, 12410-12419, 12420-12429, 12430-12439, 12440-12449, 12450-12459, 12460-12469, 12470-12479, 12480-12489, 12490-12499, 12500-12509, 12510-12519, 12520-12529, 12530-12539, 12540-12549, 12550-12559, 12560-12569, 12570-12579, 12580-

TABLE 7
FEDERAL DEBT OWNERSHIP TRENDS^a
(Billions of Dollars)

Year (December)	Privately Held			Government Investment Accounts	Federal Banks
	Private Non-bank Investors	Commercial Banks	Total		
1946	\$130.5	\$74.5	\$205.	\$31	\$23.5
1952	133.	63.5	196.5	46	25.
1956	138.5	59.5	198.	54	25.

Source: ^a Senate Committee on Finance, Financial Condition of the U. S. Hearings, 1957, p. 667.

Treasury thought that 4-1/4% interest was not adequate for the sale of bonds, would have an inflationary impact if the new securities were purchased by commercial banks. They would be added to the reserves of the banks and could be used for an increased level of loan activity. Money would be placed in circulation without an increase in national output.²³

The Federal Reserve System and Monetary Policy

Creation and organization.²⁴--The Federal Reserve System was established by authority of the act of December 23, 1913, known as the Federal Reserve Act (38 Stat. 251; 12 U.S.C. 221).

The Federal Reserve Banks were established to "furnish an elastic currency, to afford means of rediscounting commercial paper, to establish a more effective supervision of banking in the United States and for other purposes." The Federal Reserve Board determines general monetary, credit, and operating policies for the system as a whole to carry out the purposes of the Federal

²³ Congressional Quarterly Almanac, op. cit., p. 274.

²⁴ cf. Monetary Policy and Economic Growth (Washington: Board of Governors, Federal Reserve System, 1960), p. 126.

Reserve Act mentioned above. The Board has the power to change the reserve requirements of member banks as a percentage of their deposits, within certain limits. The Board of Governors reviews and determines the discount rates charged by the Federal Reserve Banks on their discounts and advances.

Federal Open Market Committee.--Each member of the Board of Governors is also a member of the Federal Open Market Committee. In addition, this committee includes five representatives of the Reserve Banks. The committee adopts regulations for open-market operations with a view to aiding commerce and business and with regard to the general credit situation of the country. Open-market operations consist of the purchase and sale in the open market of obligations of the United States.

Monetary policy.--The job of the Federal Reserve is to gain public confidence for the dollar by combatting inflationary pressures during periods when resources are fully used, and in combatting deflationary pressures during periods of slack. To meet these aims larger surpluses are needed in times of prosperity to offset the deficits of deflationary periods. Otherwise, regular increases in the public debt will be required.

Combatting inflation.--The processes of inflation are widely understood by savers and borrowers. Inflation generates the expectation of more inflation. This tends to cause an increase in borrowing and a decrease in savings. In the long run monetary policy can aid in lowering interest rates by maintaining a stable value for the dollar. Confidence will cause increases in savings which may more readily meet the needs of borrowers, thereby decreasing the pressure of the demand and lowering interest rates. During 1959 credit expanded by \$60 billion, \$20 billion more than the previous peacetime record. Supplying this huge demand was accomplished mainly by letting those who would borrow provide those who would save with inducement to risk their savings voluntarily. The banking system was an intermediary between

the borrowers and savers. The \$60 billion might have been financed by the creation of additional funds by the banking system and a consequent rapid and inflationary increase in the money supply. Such a course undoubtedly would have placed the economy and the American people in a worse position.

Interest rates.--The rise in interest rates in 1959 encouraged commercial banks to expand their loans by almost \$12 billion. They raised these funds primarily by selling government securities, which the banks owned, to the public. The competition to borrow drove rates up. The rise induced savings. During World War II and up until 1951, the Federal Reserve supported government bonds by keeping money rates down. In 1951 an agreement was reached with the Treasury that ended this practice. Monetary policy is only effective as long as it is working with the economic realities underlying the situation.²⁵ Federal Reserve actions cannot for long enforce interest rates on the market that are above or below the rates that maintain a balance between savings and borrowing. In the 1959 budget deficit, the Government, in being forced to borrow from banks instead of tapping the savings of the public, has increased the money supply. The Federal Reserve took the position that the Government must stand on its own feet in finding money to pay its bills.²⁶

The availability of money.--The central bank is the ultimate source of money under the modern credit system. In the United States the Federal Reserve is responsible for regulating the supply of cash. The Federal Reserve makes it easier for people to borrow money when the country is in a period of recession or depression. The converse is true during periods of prosperity. The objective is to maintain a high level of business without excesses which

²⁵Ibid., p. 131.

²⁶"Putting the Brakes on Inflation," U. S. News and World Report, June 15, 1959, p. 56.

might later lead to depression. The main increases in money supply have occurred in periods of business recession and in the early stages of business recovery.²⁷

Summary.--The Treasury Department has primary responsibility for management of the debt. It conducts debt transactions, prepares offering circulars and regulations regarding public debt securities. It conducts over-the-counter transactions. The three major problems in debt management are interest rates, means to increase debt maturity, and inflationary impact. The Federal Reserve System is involved indirectly in debt management because of their duty to gain public confidence in the dollar. This involves combating inflation and controlling interest rates. Interest rates are important in debt management because of the burden of the interest charges.

²⁷"Business and Economic Conditions," First National City Bank Monthly Letter (New York), February 1960, p. 20.

CHAPTER IV

IS THE DEBT A THREAT TO OUR SOLVENCY?

General

In an attempt to answer the question of whether the debt is a threat to our solvency, the following factors will be discussed:

Ownership of the debt; the debt as an internal debt.

The relative size of the debt; increasing or decreasing.

The relationship of publicly-held federal debt and GNP.

Comparison of federal debt with other public and private debt.

The relationship of inflation and debt.

The interest burden of the debt.

The debt as an internal debt.---The debt is an internal debt. Table 4, ownership of the debt, shows how the debt is distributed. This table does not indicate nationality of holders but, in certain categories listed, foreigners hold no part. They undoubtedly hold small portions of the amounts listed under "insurance companies and corporations," and under "individuals." Foreign accounts as such are listed under "miscellaneous investors."

The relative size has been decreasing.---Table 8 shows the size of the debt in selected years on a per capita basis and also as a percent of national income. In 1916 before World War I had had a sizeable effect on the debt, the per capita [debt] was \$12 per person, and the total debt amounted to only 3% of the national income. At the end of that war the per capita debt had increased 20-fold and the debt as a percent of national income had increased by

TABLE 8
RELATIVE SIZE OF THE FEDERAL DEBT^a

Year (December)	Per Capita Debt (Dollars per Person)	Debt as a % of National Income
1916	\$ 12	3%
1919	245	33%
1930	130	24%
1939	363	62%
1946	1832	136%
1952	1690	89%
1956	1631	79%

Source: ^aSenate Committee on Finance, Financial Condition of the U. S. Hearings, 1957, p. 662.

a factor of 10. Between 1919 and 1930 the debt decreased by \$10 billion and the relative size decreased proportionately. After World War II the \$260 billion debt amounted to \$1832 for each man, woman, and child, and the total was one-third larger than the national income. While the debt increased between 1946 and 1952, the population and the national income increased at a greater rate. This caused the per capita debt to decrease to \$1690 per person and debt as a percent of national income to decrease to 89%. By 1956 the debt had increased by another \$10 billion, but again population and national income increased at a faster rate, resulting in a decrease in both per capita debt and debt as a percent of the national income.

Publicly held debt and GNP.--Another way to look at the impact of the debt in relation to the total economy is to compare the publicly held debt with the gross national product. Table 9 is a comparison of these factors from 1947 to 1958. Note that gross national product has increased in every year except 1949, 1954, and 1958. In each of these cases the failure to reach a new high was only by a small margin. The trend has been a strong one,

TABLE 9
PUBLICLY HELD DEBT AND GROSS NATIONAL PRODUCT, 1947-58^a

Year	Gross National Product (\$ billions)	Publicly held debt* (\$ billions)	Ratio Debt to GNP %
1947	234.3	203.7	86.9
1948	259.4	195.2	75.3
1949	258.1	195.2	75.6
1950	284.6	201.3	70.7
1951	329.0	191.3	58.1
1952	347.0	192.0	55.3
1953	365.4	193.8	53.0
1954	363.1	197.0	54.3
1955	397.5	200.3	50.4
1956	419.2	195.5	46.6
1957	442.5	192.0	43.4
1958	441.7	195.1	44.2

* Federal securities held outside U. S. Government agencies and trust funds and the Federal Reserve System.

Source: ^aJoint Economic Committee, Hearings, Employment Growth and Price Levels, 1959, Study Paper No. 19, p. 28.

although much of the strength has been provided by inflation if such assistance can be called strength. The federal publicly held debt during this time has remained remarkably steady at about \$195 billion. Because gross national product has increased and the publicly held debt has remained stationary, the ratio of debt to GNP has steadily declined to the point where it is now about half of what it was in 1947.

Comparison of public and private debt.--A third way in which the federal debt can be measured is by comparison with the combined debt of states and localities, corporations, and individuals. Table 10 shows this comparison. In 1939 the total of debt of the federal, state, and local governments; corporations; and individuals amounted to \$207.5 billion. By 1946 the total debt

TABLE 10
COMPARISON OF PUBLIC AND PRIVATE DEBT^a
(Gross Debt in Billions of Dollars)

Year (December)	Federal Debt	State & Local	Corpor- ation	Individ- ual	Total	Federal as % of total
1939	47.5	20	89	51	207.5	23%
1946	259.5	16	110.5	60.5	446.5	58%
1956	277	50	249	207.5	783.5	35%

Source: ^aSenate Committee on Finance, Financial Condition of the U. S. Hearings, 1957, p. 665.

had more than doubled to \$446.5, largely because of World War II. As might be expected, the federal portion of the debt increased rapidly. The efforts of the nation were directed toward winning the war. State and local governments, like corporations and individuals, were unable to obtain materials and markets for peacetime activities. Projects were delayed until after the war. The federal debt rose to 58% of the total debt. Since 1946 state and local debts have risen three fold while federal debt has increased very slowly. Corporate debt by 1956 had more than doubled, but private debt had more than tripled. The net result was that the federal debt as a percentage of the total had decreased to 35%.

Consumer prices and the value of the dollar.--As the value of the dollar becomes less, the burden of the debt decreases proportionately. Table 11 shows the rise in consumer prices and the decline in purchasing power of the dollar since 1915. During periods of depression consumer prices have gone down as would be expected, but the general trend has been up. Purchasing power of the dollar has not followed exactly with consumer prices. Purchasing power rose between World War I and 1935 and has fallen fairly steadily since that time. The greatest portion of the federal debt was

TABLE 11
CONSUMER PRICES AND THE PURCHASING POWER OF THE DOLLAR
1915-56^a and 1957-59^b
(Selected years)

Calendar Year Averages	Consumer Prices (1947-49 = 100)	Purchasing Power of the Dollar (1939 dollar)
1915	43.4	1.368
1920	35.7	.693
1925	75.0	.792
1930	71.4	.832
1935	58.7	1.012
1940	59.9	.992
1945	76.9	.772
1950	102.8	.587
1955	114.5	.519
1956	116.2	.511
1957	119.6	.497
1958	123.8	.482
1959	124.2	.481

Source: ^aSenate Committee on Finance, Financial Condition of the U. S. Hearings, 1957, p. 418.

^bEconomic Indicators, December 1959 (Washington: U. S. Government Printing Office, 1959), p. 23.

caused by World War II. The purchasing power of the dollar during World War II [1939 dollars] was between \$0.99 and \$0.77. If we were to repay the debt now, we would do so with dollars worth less than \$0.50. In another 10 years with inflation at a rate of 3% per year (if such a rate may be assumed as an arbitrary example), the purchasing power of the dollar might be less than \$0.33. In that case some \$0.99 [1940] dollars of debt could be paid off with \$0.33 [1970] dollars. Following such a line of reasoning, it is not difficult to see that the debt might become less and less important as, and if, inflation continues and as gross national product increases and as purchasing

power of the dollar decreases. If this is the case, who is paying the cost? Everyone who is owed and who will be paid for what he is owed in a fixed number of dollars will lose. Part of this loss will be the loss [in purchasing power, not dollars] on government securities. The losers include people who are owed pensions and receive their money monthly, and it includes people who own [not owe] mortgages. From the above discussion it follows that future generations will not have to pay all of our debts. People who are living now are paying in the form of losses due to inflation. Future generations may have to pay off some of the debt in \$0.33 or maybe \$0.10 dollars. In addition, they will have the problem of carrying the interest burden, also in inflated dollars.²⁸ The only way we can impose a direct burden on the future nation as a whole is by incurring an external debt or by passing along less capital equipment.

The interest burden of the debt.--Table 12 shows the interest burden of the debt. Since the Federal Reserve stopped supporting government securities in the market, interest rates have gradually increased. A recent bond issue was sold with interest rate at the legal limit of 4-1/4%. At the present time [1960] the interest on the debt is about \$9.5 billion. However, the interest charge as a percent of national income, as shown in Table 12, has not been increasing. The real burden on the public is less than is shown because much of the interest returns to the government in the form of income taxes. In addition, as is shown in Table 4, much of the debt is owed by the federal government (by government agencies and trust funds and by Federal Reserve Banks). With most of the debt internally owned, people are taxed to provide funds for interest payments. The interest is paid directly and indirectly to other people within the country who are then taxed on the interest received. While it would perhaps be better to have no interest costs to pay, at least the payments remain pretty much within the country. Payments to

²⁸ cf., Samuelson, op. cit., p. 350.

TABLE 12

INTEREST BURDEN OF THE FEDERAL DEBT^a
(Excluding Guaranteed Securities)

Year (December)	Computed Interest Charge (\$ Billions)	Interest Charge as % of	
		The Public Debt	National Income
1916	Less than \$50 Million	2.4%	Less than .05%
1919	1.1	4.2%	1.4%
1930	.6	3.8%	.9%
1939	1.1	2.6%	1.4%
1946	5.3	2.1%	2.8%
1952	6.2	2.4%	2.1%
1956	7.3	2.7%	2.1%

Sources: ^aSenate Committee on Finance, Financial Condition of the U.S. Hearings, 1957, p. 663.

foreign nationals would increase the burden and also increase our balance of payments problems.

Summary.--The debt is a threat to our existence. In a period of depression the interest burden would be difficult in itself to carry. Despite the threat that the debt poses it could be worse. The debt is an internal debt. In that sense it does not impoverish the country as it might if it were an external debt. While the debt is tremendous in size, it has been decreasing relatively. The burden per person is becoming less. As gross national product increases, the debt becomes less important, provided the debt remains at about the same size. Federal debt has remained fairly constant since 1946, but the debt of states and localities, and of corporations and individuals has increased tremendously. These factors have decreased the relative importance of the federal debt. Consumer prices have increased; the value of the dollar has decreased. The owners of government

securities will receive less in return than they paid, not in dollars but in purchasing power. This fact, and the probability that it will continue, tend to make the debt more manageable. However, the interest burden of the debt continues to increase, and this increased burden is a threat to our solvency.

CHAPTER V

CONCLUSIONS

General

The analysis that has been presented in the first four chapters provides a basis for conclusions about the federal debt.

The debt a part of the nation's liabilities.--The "national debt" has been a focal point of concern by citizens and politicians for many years. But the debt is only a part of the liabilities of the Federal Government. We have other obligations which are larger than the debt, such as the contingent liabilities of the Federal Government. The debt of individuals is almost as large as the federal debt. The debt of corporations is almost as large as the federal debt. The Federal Government owns part of its own debt. These circumstances lead to the conclusion that while the federal debt is very important to us as a nation, we should not fix our attention upon it to the detriment of other factors. Maybe we should spend more of our time and effort in being concerned about individual or corporation debt. We should become more concerned about the commitments of the Federal Government. What has become debt might be small in comparison with what we may have to convert to debt in the future.

Management of the federal debt.--Maturities of the debt have been steadily decreasing, partly because of the 4-1/4% interest ceiling on bonds. The floating debt has been steadily increasing. The structure of the debt has been deteriorating. The Treasury should be concerned with achieving and

CHAPTER I

THE PROBLEM

THE PROBLEM

The problem is to find a function $f(x)$ which is continuous at $x=0$ and satisfies the condition $f(x) = x f(1/x)$ for all $x \neq 0$.

The first step is to consider the case where x is a rational number. Let $x = p/q$ where p and q are integers and $q \neq 0$. Then

we have $f(p/q) = (p/q) f(q/p)$. If $f(x)$ is continuous at $x=0$, then $f(q/p)$ must approach $f(0)$ as q/p approaches 0. This implies that $f(p/q)$ must approach 0 as p/q approaches 0.

Next, we consider the case where x is an irrational number. Let x be any irrational number. Then there exists a sequence of rational numbers r_n such that r_n approaches x as n approaches infinity.

Since $f(x)$ is continuous at $x=0$, we have $f(r_n) \rightarrow f(0)$ as $r_n \rightarrow 0$. But $f(r_n) = r_n f(1/r_n)$, so $f(1/r_n) = f(r_n)/r_n$. As $r_n \rightarrow 0$, $1/r_n$ approaches infinity, and $f(1/r_n)$ must approach 0.

Therefore, $f(x) = 0$ for all x . This is the only function which is continuous at $x=0$ and satisfies the condition $f(x) = x f(1/x)$ for all $x \neq 0$.

It is worth noting that this result is not true if we only require $f(x)$ to be continuous at $x=0$ and not for all x . For example, the function $f(x) = x \sin(1/x)$ is continuous at $x=0$ but does not satisfy the condition for all x .

Finally, we note that the function $f(x) = 0$ is the only function which is continuous at $x=0$ and satisfies the condition $f(x) = x f(1/x)$ for all $x \neq 0$.

THE PROBLEM

THE PROBLEM

maintaining a satisfactory structure. In managing the debt the Treasury should not be worried with minor swings in the economy. It should find the best way to manage the debt. This will include fitting the debt to the needs of borrowers. In other words, suitable amounts of long term securities need to be provided for such investors as insurance companies and short term securities should be available to meet the needs of commercial banks and business. The immediate impact of such debt operations should be corrected if necessary by the Federal Reserve System.

The importance of the interest burden.---The debt should be managed in such a manner as to minimize the interest burden. When interest rates are low, in depression times, the maturities should be extended so that the low rates will be a benefit to later years when rates may be greatly increased as is the case at the present time. When interest rates are high, shorter term debt instruments should be issued. It might be an excellent idea for the Government to include a "call" provision in its longer term securities in order to take advantage of more favorable interest rates in the future, if such materialize. For example, if 20-year bonds are issued at some particular time, after 10 years have passed interest rates may have become much more favorable. It would be to the advantage of the taxpayer to be able to capitalize on this fact just the same way that he can with his house mortgage, under similar circumstances, by refinancing his house. A clause might be inserted in all bonds issued stating that the bond could be recalled or paid off after 5 or 10 years by payment of face value and a penalty payment of a few percentage points. This system has been in use by corporations to their advantage for many years. The privilege of calling the issue or a portion of it would cost money as it does corporate lenders through slightly increased interest cost. Borrowers must take the possibility of a call in mind at the

time of purchase. The small additional cost could save the Federal Government a great deal of money in the future.

The debt is becoming more manageable.--The debt is becoming easier to bear financially. As an internal debt we owe it to ourselves and we pay the interest to ourselves. Much of the interest paid is returned to us in the form of tax receipts. In absolute terms the debt has become larger since the end of World War II, but at the same time the economy has grown at a rate faster than the debt. It is true that a sizeable portion of the growth of the economy has been the result of inflation, but regardless of the cause, growth of the economy [GNP] has been at a greater rate than the debt. Another factor which makes the debt more manageable is the fact that "dear dollars" can be paid off with "cheap dollars." The purchaser of a government bond of twenty years ago paid for it with dollars with about twice the purchasing power that is being returned today on maturity. Even with the interest that he has received over the twenty years, he will not get as much purchasing power back as he paid. However, for the twenty years previous to that the reverse would have been true. Bonds issued for twenty years in 1920 were purchased with dollars which would purchase \$0.70 worth of goods and in 1940 received back dollars which would purchase about \$1.00 worth of goods [both stated in 1939 dollars]. Inflation may not continue for the next twenty years. In fact, if the past provides us with a clue, it would be that we might expect a period of deflation. Despite the conclusion of a number of qualified persons that inflation is over for some time to come, there are some strong reasons to believe that it may continue. These include such things as the expected (and, in progress) population boom, and the federal policy for "full employment," which are expected to help dampen swings of the economy on the low side. In addition, the "sixties" are expected to be a great growth period for this country. Gross national product is expected to grow considerably. These

things may not happen. In a depression the interest burden or the debt would assume a greater importance than they do now, and all of the above considerations of easing of the burden of the debt would be reversed.

Worry about the debt?--The past policy of the United States has been to retire its public debt as soon as practicable. This policy has not always been followed. In fact, the deviations from the policy are more numerous than the contrary. Nevertheless, debt should be retired in good times. If the debt is contained at its present size, or preferably reduced, and if the economy continues to grow, if depression does not occur, there seems to be no reason for worry about the future of the country because of the debt. The assets of the Federal Government are very great, especially in land and buildings, and these are offsets to the debt. Perhaps some other things are deserving of more concern than the debt of the Federal Government. Perhaps we should be more worried (maybe many are) about the future obligations of the Government. Maybe we should be more worried about consumer credit or personal indebtedness. In any case, we should stop worrying about the debt and do something about it.

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